

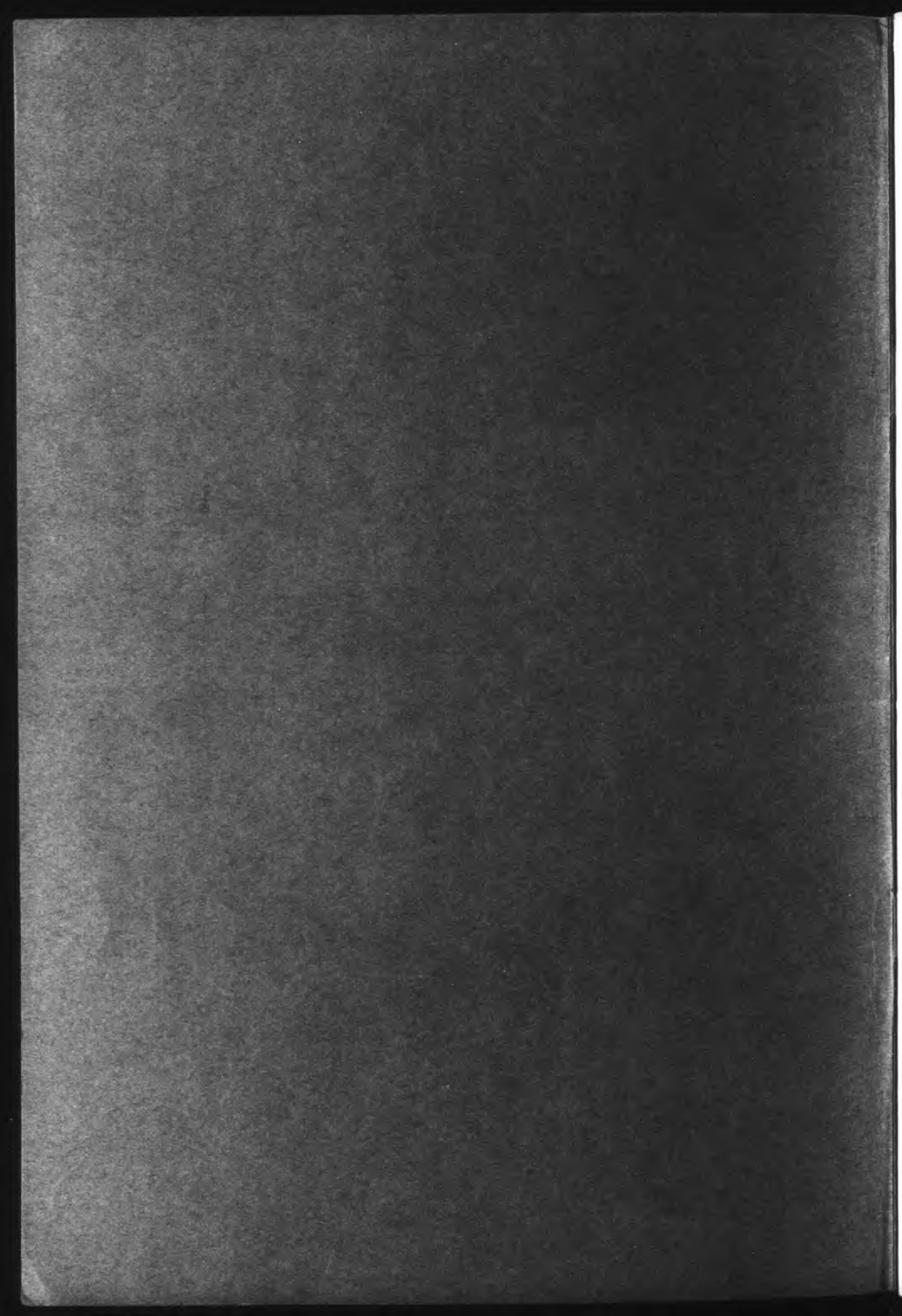
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**FOURTH BIENNIAL REPORT**  
of the  
**Department of Game and Fresh Water Fish**  
**FLORIDA**

**For Biennium Ending December 31, 1932.**  
**Statistical Report For Fiscal Biennium**  
**Ending June 30, 1932**



**C. C. Woodward**  
**State Game Commissioner**  
**Tallahassee, Florida**



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**C. C. Woodward**  
**State Game Commissioner**  
**Tallahassee, Florida**

Tallahassee, Florida,  
December 31, 1932.

To His Excellency,  
Doyle E. Carlton,  
Governor of Florida,

Sir:

Under authorization of the Laws of Florida, Chapter 13644, Section 8, Acts of 1929, I have the honor of submitting to you, herewith, the Fourth Biennial Report of the Department of Game and Fresh Water Fish, State of Florida.

The statistical report submitted covers the biennium closing June 30, 1932, with an added statistical report for the period beginning July 1, 1932 and closing December 31, 1932. The narrative report carries the story of the two year period closing December 31, 1932.

Respectfully submitted,  
C. C. Woodward,  
State Game Commissioner.

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**CONSERVATION**  
**of**  
**FLORIDA'S WILD LIFE RESOURCES**

Florida is pre-eminently an outdoor State. Not only does its climate and its many natural attractions make it a good place in which to live, but these, with other physical resources, furnish the basis for its development and wealth. Back of the State's chief industries are its forests, fisheries, a responsive soil, mineral deposits, abundant wild life in woods and waters, wayside beauty, fine bathing beaches and a matchless climate.

It is interesting to note that these are used almost in the form in which they came from the hand of the Creator. It is heartening to further note that the majority of these major resources may be maintained at a high producing level by careful handling and wise usage. Mineral deposits naturally grow less as they are mined; beaches are but little affected by what man may do; but climate and rainfall respond in a measure to drainage operations or to the maintenance or denuding of forests; while forests, fisheries, soil fertility and native wild life are very directly affected by the way in which they are handled. These facts and the relation of these natural resources to Florida's future prosperity give a very important place to the program for the conservation of the natural resources of the State.

It was in recognition of the value of game and non-game birds and animals and of the fish found in the lakes and streams of the State, that the Department of Game and Fresh Water Fish was created in 1925 and charged with the administering of the laws enacted for their protection and upbuilding. In developing the program, work has been directed along three general lines; protection, propagation and education.

The following presents briefly, and in the order named: the organization used in carrying forward the work; activities during the biennium closing December 31, 1932; the present status of wild life in the State; a summary of finances collected

and disbursed during the fiscal biennium closing June 30, 1932; and proposed legislation.

## ORGANIZATION

The workers employed under the direction of the State Game Commissioner during the biennium, comprised an office force of five, (including the assistant state game commissioner), reduced to four on July 1, 1932; four district game commissioners; forty deputy game wardens; a superintendent at the Winter Haven Fish Hatchery and one foreman; and one employee at the State Game Farm.

## ACTIVITIES

### 1. Supervision

Responsible alike for the supervision of office and field work, the State Game Commissioner has divided time between the two. In addition to supervision of established field projects (details of which are incorporated in report) time was given to building up support for the conservation program among the civic and service organizations throughout the State. There has been a corresponding interest in Florida's conservation program aroused on the part of these and of the general public.

National contacts have gained recognition for the Florida work, and have brought to the State valuable cooperation. For a period of months, R. W. Williams, supervising agent for the U. S. Bureau of Biological Survey in the southeastern states, made his headquarters in Tallahassee, maintaining a desk in Department headquarters. A native Floridian and deeply interested in the conservation of the wild life of the State, he gave freely of his time and effort in promoting the work. His ability and long experience as Attorney for the U. S. Department of Agriculture made his legal advice (given without cost to the Department of Game and Fresh Water Fish) of very great value. Through him the Federal Government was led to acquire by purchase in 1931 the St. Marks Refuge for Migratory Birds, a 20,000 acre tract lying in the heart of the wintering grounds for Canadian geese.



"Florida Bird Life", by A. H. Howell, Senior Biologist of the Bureau of Biological Survey, U. S. Department of Agriculture, was published during the biennium co-operatively by that Department and the State Department of Game and Fresh Water Fish.

Recognition of Florida's conservation work has given it place on several national programs and on two international programs. One feature of the work, the establishing and maintaining of wild life breeding grounds and refuges under the Florida plan, has attracted wide attention and much favorable comment. (Please turn to page 8 for report of this work.)

## **2. Office Work**

The assistant state game commissioner directs the routine office affairs, edits the Monthly News Bulletin, a mimeographed sheet that goes to the press, county judges and a select mailing list. Featuring a monthly financial statement from the desk of the bookkeeper it has kept the public fully apprised at all times of the handling of revenues by the Department, while the monthly summary of cases for game law violations and the handling of the same by the courts has kept county judges informed as to those who, because of conviction for breaking provisions of the game law, are ineligible to buy hunting licenses.

Other affairs of the office are handled by the secretary (who took over the stenographic work of the employee dropped July first), by the bookkeeper and by the clerk who directs the educational program for the Department. For report of this latter see pages 34-38.

## **3. Law Enforcement**

The four district commissioners who stand at the head of the law enforcement division, not only direct the activities of the deputies assigned to their respective districts, but themselves are active in making arrests for game law violations and in following all cases as they take their way through the court. Their work greatly strengthens the work of the forty wardens.



Records show that during the biennium 1860 arrests were made by this division; 21 bonds were estreated; 312 cases nolle prossed or dismissed; 324 pending or not reported. Records of the later disposition of these will be carried into the current fiscal year. During the biennium there were 1203 convictions for game law violations. This represented tireless work on the part of the enforcement division.

Cooperating with this force were 1,000 honorary wardens, men interested in the conservation of wild life who serve without pay. Their counsel and active support have been valuable. In a few counties sheriffs have assigned special deputies to assist in enforcing the game law.

While the courts generally co-operate in the handling of arrests for violations of the law there have been some notable exceptions to this, and to these exceptions are attributable, many of cases shown as "nolle prossed or dismissed" and of the number "pending". Department records show that 59 cases were taken into court in one county to be disposed of as follows: 19 dismissed, 27 yet pending, 5 fine and costs—and 8 not reported. In another county the prosecuting attorney (since removed) would rarely file information against game law violators. The law fixes the minimum fine for game law violations at \$10. In several counties fines are below the minimum prescribed. In these counties it is not an unusual thing for the court to fine but \$1 and then to remit the fine or suspend the sentence. In a few counties in the tourist section of the State courts make no effort to handle violations of the law relative to fresh water fishing. Where courts have co-operated in the handling of game law violations there is better observance of the law by those who hunt, fish and trap and a growing respect for the law on the part of the general public.

While cooperating sportsmen's organizations do not form an official part of the Department they have done much to augment results. There are a number of such organizations that stand strongly back of Florida's conservation program.

Outstanding among these organizations are the Izaak Walton League; the Florida Wild Life League, (organized during

1932); and a number of county Game Protective Associations, local organizations composed of men interested in the conservation of the wild life of their section, associated to strengthen law enforcement.

Among organizations other than those of sportsmen that are cooperating strongly in building the program for conservation of Florida's wild life are the State Chamber of Commerce, the State Junior Chamber of Commerce, the Florida Audubon Society and the Florida Federation of Women's Clubs. These maintain active conservation departments in their state organizations with corresponding departments in their local chambers, clubs or branches.

#### **4. Breeding Grounds and Refuges**

States have come to recognize breeding grounds and refuges as the most effectual means for the re-establishment of native wild life, the greatest assurance that can be provided against its becoming extinct. In the majority of States such areas are established at great cost to the commonwealth. The limited sums available for conservation in Florida and the large area in which wild life should be maintained made the purchase of areas for the establishment of preserves impractical here. To meet the situation the Florida plan of closing selected areas by mandate, was evolved. At the present time there are 43 state breeding grounds and refuges lying within 53 counties and embracing 3,500,000 acres of choice game territory. These breeding grounds replace, in a large measure, those natural ones lost through the building of good roads which now penetrate once inaccessible areas where wild game bred undisturbed. During the biennium closing December 31, 1932, six of these areas, embracing a total of 500,000 acres, were established. The largest of these is the Santa Rosa Breeding Ground. It embraces some 107,000 acres. This, like other preserves, was not created until local demand gave reasonable assurance of cooperation from local sportsmen in maintaining its sanctity. With the limited warden service that Florida provides—forty men to guard sixty-seven counties—such cooperation is imperative. The careful observance of restrictions as to hunting and trapping in the Santa Rosa Breeding Ground

has not only been encouraging, it must result, within the next few years, in a large increase in game in the section. What is said of cooperation on the part of sportsmen of Santa Rosa County applies generally to sportsmen throughout the State. Boundaries of breeding grounds and refuges are respected in most sections. Results have secured this cooperation.

In locating these breeding grounds and refuges they have been chosen primarily with respect to their value as preserves for deer and turkey, these being the two species of game that needed most the protection that the preserves only could furnish. In every instance there has been a noticeable increase in the supply of wild life in these areas. It is Florida's best guarantee for the future supply of breeding stock. In several of the breeding grounds the increase of deer and turkey has been beyond the expectations of the most optimistic. At the same time the passing of the surplus to surrounding territory has yielded more game for the sportsmen.



"Deer Hunting in Florida is on the Upgrade"  
Bucks Only May Be Killed

Quail have found included in the preserves suitable areas in which to breed and have made the most of them. While breeding grounds have given to the naturalist the increase in wild life which he is interested in securing, their yield in deer, turkey and quail has been especially appreciated by the sportsman whose interest lies both in an abundance of life in the wild and good shooting in season. While bucks only may be killed, deer hunting in Florida is on the upgrade; the increased supply of turkeys has given better turkey shooting; and the 1932-33 hunting season gives promise of fair sport with quail.

The overflow to open territory of the surplus game that raises in the breeding grounds is a large factor in restocking in Florida and providing good shooting for such territories. Furthermore, it has been found that to transfer quail from breeding grounds to shot-out areas, after the hunting season closes, to serve as seed stock, is an effective, inexpensive method of restocking. During the biennium approximately 5,000 birds were transferred. The increase from these transfers to the supply of game in Florida, estimated on a most conservative basis, would add in the biennium 50,000 birds to the State's supply.

In addition to the increase of game in the breeding grounds there has been a marked increase in those species of non-game birds and animals that breed in the type of habitat suitable to deer and turkey. This has been gratifying. Certain water birds, among them the beautiful roseate spoonbill, the egrets, herons and ibises are finding these protected areas safe places in which to build their rookeries. The spoonbills, once nearly extinct, maintain one very large colony of breeders. The egrets, (American and Snowy), another bird that had been almost wiped out by plume hunters, are to be found in all parts of the State. Some of their largest rookeries, the largest in the world, are found in some of these protected areas.

With but few exceptions refuges and breeding grounds are closed to trapping throughout the year. While the law makes it permissible for the State Game Commissioner to issue permits to trap in such areas, and this is done when it seems necessary to reduce predators, the great reduction in these animals

that resulted from the high market for furs of a few years ago, has made the closing of these areas to trapping seem a wise thing.

An increase in the number of wardens would greatly increase the protection that can be given breeding grounds. The revision of Florida's Game Laws so as to provide that streams, railroads and established public roads should serve the same purpose as would a fence in establishing the boundary lines of breeding grounds, would strengthen the provision of the law under which areas are closed for breeding grounds and refuges.

It would be well if it were required that State breeding grounds be established in each of the fourteen counties now without such closed areas as soon as adequate protection can be provided.

### **5. Federal Refuges and Preserves**

Refuges and preserves maintained in Florida by the Federal Government and the Audubon Society total fifteen. These play an important part in the preservation of Florida's wild life. The last to be established, and from the standpoint of game protection, the most important, is the St. Marks Refuge for Migratory Birds. In December, 1930, the purchase of 13,000 acres extending across the lower part of Jefferson County and into Wakulla County on its west, was authorized by Federal authorities. In 1931 this area was increased to 20,000 acres and extended into Taylor County. Not only does it afford refuge for migratory birds, lying as it does in the heart of the Florida wintering ground for Canadian Geese, but, since it embraces some of the best deer and wild turkey territory in this section of Florida, and no shooting is allowed in the area, it will give to these two species of game adequate protection.

Early in 1932 Chinsegut Hill, the winter home of Colonel and Mrs. Raymond Robins, an estate of 2,000 acres in Hernando County, about five miles north of Brooksville, was deeded to the Federal Government for a migratory bird refuge and an experiment farm and forestry station. The gift included well timbered land and also embraced a fine citrus grove, with com-



plete dairying, poultry and stock raising units. A show place of Florida, it will be developed into a game and bird sanctuary, sub-tropical plant experiment station, a forestry culture and protective station, with animal husbandry, poultry and farm demonstration units.

### **Everglades Park**

The project through which a National Park would be created in the far southern part of the State, and which has received the endorsement of authorities at Washington, it is hoped will receive favorable consideration at the hands of the incoming Congress. Lying in the amazing Everglades region, extending as far south as does lower Egypt, the proposed park would add to the national park system not only an area characterized by its rare plant life of wild beauty, tropical and unusual, but it would save for the bird life of America one of its greatest winter retreats, a section that holds some of the greatest rookeries for rare species of water birds to be found anywhere in the world. Visiting it in recent years, Dr. Gilbert Pearson, president of the National Association of Audubon Societies, said "We saw not less than forty thousand egrets, ibises, herons and other water birds. In great flocks we watched them arise from their nesting places and sweep across the glades and jungles. Deer and wild turkey are common sights." Attractive as would be this national park to the thousands to whom it would be easily accessible, its value as a refuge for wild life both native and migratory, makes its early establishment of interest to outdoor lovers everywhere.

### **6. State Game Farm**

The following report of the operation of Florida's State Game Farm, maintained at Raiford by the Department of Game and Fresh Water Fish in cooperation with the Florida State Farm, is submitted by Mr. T. W. Shuler, Manager of the Wild Game Department of the Florida State Farm and also of the Poultry Department of the Farm. This work was undertaken in 1930. A brief history of it from its beginning is included here.



## **Report on Operation of Quail Farm**

### **By T. W. Shuler**

Early in the year 1930, our Florida State Game Commissioner, Mr. C. C. Woodward, in cooperation with the officials of the Florida State Farm, decided to begin the propagation of game birds and deer. Sufficient and suitable space for the purpose was selected and equipped in February 1930. The deer herd and the wild turkey flock was placed under the supervision of the Agricultural Manager of the Farm. The writer has been for several years in charge of the Poultry Division of the State farm, and was given supervision of the breeding of quail and pheasants. As my experience at that time was limited to poultry breeding, an immediate search for information and advice was begun. This eventually resulted in a trip to what is undoubtedly the foremost establishment for artificial quail propagation—the White Oak Quail Farm of Mr. W. B. Coleman at Richmond, Va. This was a trip to “look, listen and learn”, which was done as best I could. I was made to feel at home, and was likewise made to feel that I was to derive as much benefit as I could from Mr. Coleman’s long experience with quail, and now I consider that the degree of success which we have obtained here has been due to my trip to Mr. Coleman’s plant.

We started our 1930 season with 35 mated pairs of Bob White. Of these 20 pairs were captivity reared birds, 15 pairs were wild trapped birds. From these birds, we gathered that season 1018 eggs, an average of 29 eggs per pair. This very low average was due to the presence of the wild birds, as our best captivity reared birds produced 114 eggs for that season. From these 1018 eggs we hatched 786 baby quail, 77%. We used a Buckeye Mammoth Incubator with 6144 capacity for hen egg. From these 786 quail chicks, we raised 662 to maturity, 84%. As soon as dry, we placed the chicks from the incubator to an electric brooder of our own design. This brooder is 18 x 36, with a 6 foot runway at the rear. There was immediately placed before them Larro starting mash, Spratts chick grain, clabber, grit, charcoal, oystershell and lettuce or crimson clover, chopped fine. They were kept on the wire and the same diet until they were 4 or 5 weeks old, when they were placed on the ground in movable growing

pens, size 10 feet by 12 feet. These pens had been sown in clover and lettuce, in time for it to be the right size for them to eat on their arrival. They were changed from starting mash to Larro turkey and game bird developer, and Kaffir corn, millet seed, peas and peanuts then being added to their feed.

### 7. Operations in 1931

From the birds reared in the 1930 season, we retained 70 pairs as breeding stock, with a few extra birds for replacement in our show pens. With these 70 pairs of captivity reared birds in our mating pens, we started our 1931 season. As our first settings of quail eggs were small in number, and our busy chicken hatching season was on, these were set along with our regular hen egg settings, no change being made in the degree of heat or moisture. The results were excellent. Our third setting ran some 25% infertile, though, so it was decided to place a number of the pen from which it was taken upon each egg. A regular sheet for hens trap nest records with columns provided for a record of eggs laid in each pen, the number of infertile or dead germ eggs, was used. We indicated on the sheets the number of eggs left after the hatch, from each individual pen. These records were kept faithfully week by week, and they showed surprising differences between the birds, some of which were as follows: 126 eggs gathered from pen 70, turned out 2 infertile, 4 dead germ in all season; pen 65 gave 33 eggs for the season, not one infertile or dead germ egg. On the other side of the picture, pen 5 produced 115 eggs, resulting in 110 infertile and 1 dead germ. As the bird in this pen was a splendid egg producer, several attempts were made to satisfactorily mate her, but no results were ever obtained. Needless to say, she has been eliminated from our breeding stock. With an eye to future breeding stock, mesh wire partitions were inserted in our hatching trays. In mid-season (August), we started hatching separately the eggs gathered from 20 of our very best birds, each bird's eggs being placed in a space partitioned off by wire. From 295 eggs set in this manner, we obtained 250 fine quail chicks, an 85% average. These eggs showed uniform hatchability; the chicks were vigorous, and were placed in separate pens, and as soon as they were large

enough, they were banded to distinguish them. It is our belief that line breeding is possible and may accomplish almost as good results in artificial quail propagation as in poultry breeding.

### 8. Incubation

Returning to our earlier subject of incubation; only three small quail hatches had come off before our chicken hatching was completed. We then operated our incubator on 99-3/4 degrees heat, with a wet bulb temperature of 85 degrees. Our



T. W. Shuler, Manager of Florida Game Farm  
with Young Quail in Growing Pen

results were satisfactory until July. We were then experiencing the dryest and hottest weather of the past 20 years. The thermometer in one of our mating pens showed a reading of 108 degrees. Our egg pickup fell from 400 on the week of June 23rd to 250 on the week of July 14th. Fertility and hatching percentages also declined in an alarming manner. The dry weather, continuing, the first week in August our moisture in the incubator was increased 87 to 88 degrees wet bulb temperature, with a hygrometer reading of from 52 to 55. This increased our hatches some 10%. Egg production for the season was 6052 eggs, an average of 86-1/2 per pair. Of these eggs 100 were shipped to Germany in an exchange, 60 distributed to private individuals in the State, 32 set under two

bantam hens, 58 cracked in transportating or packing, 5802 placed in our incubator. These 5802 eggs hatched 4195 birds, 72%. We brought to maturity some 2400 birds, 58%. Our problem during the dry hot weather was more how to keep our birds cool than how to keep them warm.

### 9. High Records

Our best laying hen produced 131 eggs; second best 126 eggs; third best, the high laying hen of 1930, gave us 121 eggs. We found in checking the records, that our 40 best pairs of mated birds in 1931 averaged 85 eggs per pair, one egg below the general average. The average of infertility from them was  $3\frac{1}{4}\%$ , or  $4\frac{3}{4}\%$  below the general average. The average of dead germ eggs was  $12\frac{1}{4}\%$ , or 7% below the general average. Their hatching percentage was  $84\frac{1}{2}$  or  $12\frac{1}{2}\%$  above the general average. We firmly believe that 1800 of the birds we raised to maturity were produced by these 40 pairs of birds. Twenty five pairs of these, the best egg producers, are in the mating pens, mated the same as in 1931. Twenty five pairs, selected from our separately hatched chicks mentioned before, have been mated to avoid interbreeding, and placed in our mating pens.

Our production costs in 1931 averaged \$1.20 for each bird brought to maturity. I would not advise using these figures for comparison purposes, as these birds were produced by trusty labor from our State Prison at Raiford.

The Bob White in the wild, his natural invironment, finds the Florida State Farm a good place. No one is allowed to molest him or his family at any time of the year. He raised 7 covies on the grounds occupied by the poultry farm last year, and it occupies only a very small portion of the 18000 acres of the farm; and he had to share that with from 8000 to 10000 chickens. They did not seem to bother him to any extent, though, as he brought his family into the chicken yards and consumed a part of the foods placed there for them. As I have been writing this article, I have heard from several directions, bushes and pine lands, his cheerful call of Bob White, letting

the world at large know that his mating season has arrived and that "Happy Days are Here Again".

### **10. Hungarian Partridges**

The 100 Bob White eggs mentioned as having been sent to Germany were exchanged with a game farm in Bavaria for 100 Hungarian partridge eggs. We received these on May 20th, with only 3 cracked from the long trip from Germany. Of these 100 eggs, 97 were immediately placed in our incubators. We were rewarded with 74 splendid chicks. These were carried in our brooders for six weeks, with a loss of four birds. They were then placed in our growing pens, and during their first two weeks on the ground, we lost 24 of them. We were never able to determine the cause of this heavy mortality. Our State Veterinary examined several of the birds, but could not determine the cause of their deaths. We have become very much interested in this splendid bird, and after distributing all that we could spare on applications, we have retained 24 for breeding purposes. It may be that our troubles with them are commencing, male and female created He them—but to this date I have been unable to definitely determine which is which.

### **11. General Care**

We have not had to combat any epidemics of disease among our birds. Strict sanitation is our rule at all times.

A snake got four of our quail, but he was soon discovered and promptly killed. This is the only loss which we have ever suffered from a predator.

After the day men quit work, the trusty assigned to night watch at the quail farm, makes his rounds regularly, to see that little Bob on the brooders, Big BOB in the pens, and the pheasants and the Hungarians are all O. K. throughout the night.

### **12. Operations in 1932**

The 1932 season was started with 70 mated pairs of Florida Bob White Quail. These were composed of the 40 pairs with



#### FOURTH BIENNIAL REPORT

the best records in 1931, and 30 pairs, selected from our 1931 hatched birds.

We lost only two hens by death in our mating pens. One of these two was our best egg producer in 1930 and our third best in 1931. She had laid 93 eggs up to August 1st, 1932, when she died.

These 70 pairs of quail produced 5959 eggs, averaging 85 eggs to the pair.

Our best egg producer in 1931 was again our best layer in 1932; 150 eggs being produced by her this season. A special feature is the fertility and hatchability of her eggs. Of her 150 eggs only two were infertile. These came the last two weeks of the season. Eleven of her eggs were dead germs; unfortunately five were cracked. Of her 150 eggs 132 were hatched. Her record is at the top of the list of the 25 best pairs of mated birds. She and her mate are a source of much pride to the negro prisoner who attends to the birds in the mating pens. After watching her and her mate affectionately billing each other one morning, the negro remarked, "She sho loves her m-a-n don't she"? I'll say she does.

### 13. OUR CHAMPION QUAIL HEN

#### STATE GAME FARM RAIFORD, FLORIDA

##### 1931 Egg Record

Eggs laid .....	131
Infertile .....	3
	<hr/>
	128
Dead Germ .....	18
	<hr/>
Livable birds hatched .....	110



# DEPARTMENT OF GAME AND FRESH WATER FISH

## 1932 Egg Record

Eggs laid .....	150
Infertile .....	2
	<hr/>
	148
Dead Germ .....	11
	<hr/>
	137
Cracked in handling .....	5
	<hr/>
Livable birds hatched .....	132

## 1931 & 32 Seasons

Total Eggs laid .....	281
Total infertile .....	5
	<hr/>
	276
Total dead germs .....	29
	<hr/>
	247
Total cracked in handling .....	5
	<hr/>
Livable birds hatched .....	242

## 14. Egg Records

The methods used to arrive at these figures are as follows:

Each mating pen is numbered, also each mated pair of quail are banded. The number of the pen from which the eggs are gathered is written on the eggs. A regular sheet for hens trap nest records, with columns provided for (A) number of eggs laid in each pen (B) number of infertile or dead germ or otherwise unhatchable eggs, was used. We also indicated on this sheet, the number of eggs left after the hatch from each individual pen. These eggs are candled to determine whether they were infertile or dead germ. In following this method it is easy to arrive at the individual egg producers as well as their hatchability, etc.

## FOURTH BIENNIAL REPORT

## 15.

MATED PAIRS—BOB WHITE QUAIL—FLORIDA STATE FARM,  
RAIFORD, FLORIDA

INCUBATION RECORDS—25 BEST EGG PRODUCERS  
1932

Pen No.	Eggs Laid 1932	Eggs Incubated	Eggs not set, cracked, culls, etc.	Eggs cracked in incubation	Infertile	Dead Germs	Cripples Hatched	Good Birds Hatched	Hatch Per Cent	Week's Laying	Average Eggs Laid Per Week	Average Eggs Hatched Per Week
25	150	145	5		2	11	5	127	88	24	6-1/10	5-3/10
53	119	119			32	27		60	51	24	5	2-1/2
2	114	114			5	9	3	97	85	22	5-1/4	4-2/5
33	111	110	1		3	7	3	97	88	22	5	4-2/5
15	106	106			2	5	4	95	90	22	4-7/8	4-3/10
6	106	106			3	33	5	65	62	23	4-3/5	2-7/8
4	105	105			1	10	3	91	87	23	4-3/5	4
49	105	105		1	2	14	5	83	79	22	4-4/5	3-4/5
17	104	104			8	16	4	76	73	23	4-1/2	3-3/10
36	104	104			1	26	5	72	70	22	4-4/5	3-3/10
65	102	102			4	31	5	62	61	22	4-3/5	2-4/5
27	102	102			1	8	3	90	88	23	4-2/5	3-9/10
70	101	101			8	15	5	73	72	23	4-2/5	3-1/5
24	101	101			2	15	4	80	79	22	4-3/5	3-5/8
52	100	100		1	6	12	3	78	78	23	4-3/8	3-2/5
28	94	94			5	12	3	74	79	23	4-1/10	3-1/5
29	92	92			4	9	5	74	80	20	4-3/5	3-7/10
16	91	91			3	6	6	76	84	20	4-1/2	3-4/5
19	91	91			5	13	3	70	77	20	4-1/2	3-1/2
31	90	90			3	3	5	79	88	23	3-9/10	3-4/5
62	90	89	1		5	9	5	70	79	22	4-1/10	3-1/5
40	89	85	4		1	11	3	70	82	20	4-2/5	3-1/2
48	88	88			8	2	2	76	86	21	4-1/5	3-3/5
55	88	87	1		2	5	3	77	88	22	4	3-1/2
68	87	86	1	1	2	9	5	69	80	20	4-3/10	3-1/2
2530	2517	13	3	118	318	97	1981	78-7/10	22	4-3/5	3-3/5	

Average number Eggs produced—101 Eggs per pair.

“ “ Good Birds “ — 79 Birds

Needless to say that we are very proud of this pair of quail; and with an eye to future breeding stock; the first of this season, we placed wire partitions in our hatching trays for the purpose of hatching her eggs separately from other eggs gathered. When hatched they were placed in brooders by themselves, and when large enough were banded.

It is our belief that line breeding is possible; and may accomplish the same results as in breeding poultry, allowing some consideration for the short laying season.

We intend to line breed this hen and her offsprings this next season, and hope to submit a more interesting report at that time.

#### 16. Summary of Production 1932

Of the 5959 eggs gathered from the 70 pens 5908 were incubated; 51 being either cracked, too small or with false shells. From these 5908 eggs we produced—

4233	Good Birds—	71 3/5%
472	Culls (cripples)—	8%
329	Infertile eggs—	5 4/5%
865	Dead Germ Eggs—	14 3/5%
9	cracked in handling	

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5908

#### 17. Trouble

Our first hatch came off April 28th and all during May everything was lovely—80 to 85 per cent hatches—quail chicks doing well in the brooders with very few deaths.

In June the chicken pox or “sorehead” put in its appearance and practically cleaned out the young birds in our growing pens. The adult birds appeared to be practically immune.

There was no “sorehead” in the brooders. The same conditions were true of our wild turkeys and our poultry flock.

This epidemic of "sorehead" appeared to be quite general throughout Florida and South Georgia. There was much vaccination as a preventative for this disease, and the use of live virus is believed to have been a factor in the widespread of the infection. Mosquitoes are also accounted one of the main sources of transmission of "sorehead".

The adult birds among the quail, wild turkey and poultry are believed to have been immune due to previous infection or vaccination.

The quail chicks in the brooders were, without doubt, protected by not being accessible to any carrier of disease.

But the young birds placed in the growing pens suffered heavy mortality almost as soon as they were placed there.

We put "isolation pens" some quarter of a mile distant, where all infected birds were placed; moved all other birds on fresh ground and disinfected and put everything under stricter sanitary conditions. A box full of sawdust soaked in disinfectant, and sunk in the ground at each pen gate so that it was impossible to enter or leave without stepping in it, made the disinfecting of shoes a certainty. In this way we had checked the disease to a great extent by August. But we had suffered heavy losses and had a crimp put in our season's production.

### **18. Released to Wild Life**

The Florida State Farm comprising 18,000 acres has been made a State Game Preserve. The Farm had a good population of wild quail but not enough.

Of the 1931 hatched quail, 450 mature birds were released on the Farm in the spring. During this season 1000 of the 1932 hatched quail were released there along with mature birds for covey heads.

A system of predator control; arrangement of cover and the proper planting of the right foods for quail are expected to make of the Farm a delightful place of residence for Bob White.

Under your order to release to sportsmen's organizations, and responsible landowners in the State who have property (not less than 160 acres) under fence, part of which was under cultivation, same to be closed to hunting for at least two years, we have shipped 991 birds. By allotting birds to the right kind of landowners, it is hoped to obtain the maximum of interest, and cooperation in game conservation from them. We have also released to wild life some 75 turkey hens and 16 gobblers for restocking.

We are happy to say that our incubation results are showing constant improvement, and our average egg production increased 2 eggs per pair over last season. But disease reduced our total of birds brought to maturity.

We have been fairly successful in raising deer during this past season. We now have a herd of 24 on the Farm. Eight of these we raised during 1932.

In every endeavor the best results are desired. But at this stage of game bird breeding it is possible that knowledge gained, even at an unwilling loss of results, may in the long run prove to be of best advantage.

Following your orders, all our Hungarian Partridges and Pheasants have been or soon will be released, and distributed to game conservationists in the State for release purposes—and 1933 operations will be confined to a limited number of pairs of our very best breeders among the quail.

We have the pen of doves which are largely for ornaments. But we will very likely release some young doves on the Farm next season.

I am adding a cost sheet furnished, at my request, by the State Farm Accountant, Mr. H. W. Davies. Were releases to the State shown at current prices paid for birds a very fine credit balance would be shown.

T. W. Shuler,  
Superintendent Wild Game,  
Florida State Farm,  
Raiford, Florida.

## 19. Cost of Production 1932

Mr. T. W. Shuler, Manager,  
Quail Farm.

Dear Mr. Shuler:

As per your request I am handing you herewith figures showing operation of the Quail Farm for the year 1932.

MONTH	TOTAL EXPENSE	QUAIL ON HAND	COST PER QUAIL PER MONTH
Jany.	\$ 32.76	1290	.02.54 cents
Feby.	177.66	1290	.13.77 "
March	85.18	1026	.08.30 "
April	81.42	2403	.03.39 "
May	141.90	1872	.07.58 "
June	209.31	2176	.09.61 "
July	209.48	1676	.12.50 "
Aug.	223.52	1927	.11.60 "
Sept.	116.32	1961	.05.93 "
Oct.	154.84	1294	.11.96 "
Nov.	89.41	1157	.07.73 "
Dec.	111.99	1138	.09.84 "
Total	\$1,633.79	19210	

Average

Per Month 136.15 1600 .08.50 " Each

Sales — Cash .....\$ 1,230.75

Released to Wild Life ..... 491.85

Total ..... 1,722.60

Cost ..... 1,633.79

Net Gain .....\$ 88.81

The above cost is for Food and Supplies and does not include salary. However, the Release to Wild Life revenue shown as \$491.85 is at **book cost** figures of \$0.50 each while the cash sales were principally at \$7.00 per pair and in some instances at



\$10.00 per pair. There were several hundred sold at \$2.75 per pair.

Other than the months of Feb., June, July, August and Oct. which shows unusual heavy expenses the average would be below 6 cents each per month.

Yours truly,  
H. W. Davies,  
Cost Accountant.

## **20. Requests for Information**

Numerous requests for information on the artificial propagation of quail have reached the Department. Some of these have come from sportsmen interested in restocking their own grounds, others from those who are interested in its commercial possibilities.

Quail can be raised in captivity. Thousands have been raised during the past few years by conservation departments in a number of states and by individuals. In the matter of costs Florida's State Game Farm has been operated on a low comparative basis. The cost in all cases is too high to warrant restocking on a large scale with birds raised in captivity. Such birds can be used economically only as breeding stock on areas where the supply has been practically destroyed; where trapped wild birds are not available; where food and cover conditions are favorable; and, where shooting is to be prohibited for two years or more.

Since the raising of quail is in an experimental stage, the market uncertain, it must be regarded as a hazardous enterprise when viewed from the commercial standpoint.

Information as to methods and cost of raising quail in captivity and also information and suggestions as to keeping up the supply in the open will be mailed to those requesting it.

Bobwhite quail in the wild are prolific if conditions are favorable. Sportsmen and landowners in Florida would do well to

direct their activities for increasing the quail supply to the improvement of food and cover, control of predators and the regulation of shooting. The drain upon the supply in the last few years has been very heavy. The more conservative shooting on the part of many sportsmen in 1931, the more favorable



"Good Sport Afield"

breeding season of 1932 brings the biennium to a close with a fair supply over the State. For the better protection of this choice bird some sportsmen are suggesting reduced bag limit. The difficulty of securing the enforcement of the present bag limit raises the question of the efficacy of a further reduction in the bag. The alternative would be a reduction in the season. Florida's hunting season and bag limit are both over liberal as compared with those of the majority of the States. The good sport afield now found in Florida must be maintained.

## **21. Cost of Hunting Licenses**

Revenue from hunting licenses should be sufficient to afford protection for game and costs of replenishing the supply where

this becomes necessary. At current prices for breeding stock no license charged in Florida where even a moderate bag is killed covers the replacement cost of the breeding stock represented in the game slaughtered. Florida's long breeding seasons, vast open areas, and good supply of breeding stock have made possible the liberal bag limits allowed. An increase in the numbers of men who hunt, in the efficiency of the modern gun and the accessibility of all game territory brought about by good roads and automobiles necessitate better protection. Revenue for this under present provisions of the law have shown a steady decline during the past three years. While it may seem paradoxical to propose an increase in revenue through a reduction in the cost of licenses, to many who have given the matter thought this has seemed possible. The following has been recommended:

Reduce the State-wide resident hunting license from \$8.00 to \$5.00. Eliminate "Additional County Resident Hunting License". Increase County Resident Hunting License from \$1.25 to \$2.00.

Reduce State-wide Non-Resident Hunting License from \$25.00 to \$15.00.

It is thought that the lower cost for a resident State license with the elimination of a county license would lead to the purchase of the State license, while the increase in the county resident hunting license from \$1.25 to \$2.00 would still retain the privilege of hunting within one's home county within the reach of every man who can afford to own the equipment with which to hunt, and the increase would provide the needed protection for game.

The decrease proposed in the non-resident license was proposed in the hope that it would materially increase the number of licenses sold.

For the numbers of hunting licenses of different classes sold during the biennium please turn to page 43.

## 22. FISHING

For outdoor recreation no State can surpass Florida. In this sport program fishing holds an important place. The well stocked lakes and streams provide the world's greatest black bass fishing grounds. In many of these waters both species, large mouth and small mouth, are found. Bordering waters of the Atlantic and the Gulf of Mexico teem with the choicest of game and food fish. All combine to develop a common love of fishing on the part of residents throughout the State and to attract to the State lovers of the sport from everywhere. The decrease of good fishing in many States has brought increased appreciation for what may be found here. Florida's fishing grounds, long the objective of the skilled angler, are proving a lure that brings to the State annually increasing thousands who, (born with a love of fishing), have had but scant opportunity to try their luck elsewhere with any great degree of hope for success. Thousands of lovers of outdoors whose hands instinctively reach for pole and line are found domiciled in Florida's comfortable hostelries or camped under spreading oaks, or on the border line of some hardwood hammock, or near the coast—often with salt-water fishing right before them and fresh water fishing within a hundred yards—always within easy access of incomparable fishing. With the small equipment needed for shelter and bedding in a Florida camp such sport comes within the cost range of the masses.

A source of wholesome recreation for Floridians, of needed food for many, and an important source of income because of the many tourists that it brings to Florida, need never be lost. To retain it, however, there is needed a strict observance and enforcement of bag limits on fresh water fish; the closing of fresh waters for a part of the spawning of bass and bream; the making of the law prohibiting the use of nets in streams and lakes in Florida, statewide in its application. There are no waters in the State so well stocked with bass and bream that they do not need this minimum protection. Some have been so depleted that there is but little ground for hope that their once abundant supply of fish will be rebuilt without such protection. All would profit by it. Especially is this protection needed on

bass. This premier sport fish of Florida's fresh waters needs the further protection that would be afforded by taking him from the list of Florida fish that may be sold in Florida markets or shipped into other states, for sale.

### 23. Prohibit Sale of Bass

Opinion has been divided in the past as to whether or not the sale of Florida Bass should be prohibited. It is the commercial net that has depleted Florida's supply of this the choicest of sport fish. To take them out of the commercial



"Take Florida Bass from the  
Commercial Barrel"

barrel would affect but little, Florida's fishing industry. To retain them in Florida waters strictly as a sport fish would not only retain for the people of this state the greatest sport-fishing in the world, but would preserve for Florida one of the greatest attractions that it has to offer to those visitors that it hopes to attract from other states from year to year. The value of bass as an attraction to the tourist so far exceeds the value of bass sold in the market that it would seem sufficient reason to conserve bass for sport fishing only. This can only be done by prohibiting the sale of bass within the State or the shipment of bass out of the State for sale. This

can only be done through legislative action. It is up to the people of the State to say whether they will market their bass in barrels or will sell them to the anglers of America.



## 24. Closed Seasons

Under the law county commissioners may declare a closed season on fishing—not to exceed 60 days—in their respective counties. During 1932 the following counties declared closed seasons: Leon, Liberty, Gulf, Bay, Calhoun. For 1933 the following will observe a closed season: Gulf, Calhoun, Washington, the Choctawhatchee River and its tributaries (these lie chiefly in Walton, Holmes, Washington Counties), Sumter and Orange. It is interesting to note that these counties that have provided for themselves closed seasons during the spawning of their choicest game fish, have within their limits some of the best fishing to be found in the State. Their action shows local interest in retaining what they have.



"Marketed to an Angler"

## 25. Restocking

For restocking purposes the State maintains two fresh water fish hatcheries, one at Welaka, the other at Winter Haven. The latter, devoted exclusively to hatching bass, is under the supervision of the Department of Game and Fresh Water Fish. The young bass from this hatchery have been held each year until of fingerling size (from 3 to 5 inches). It is estimated that 50% of bass released at this size will reach maturity. This greatly exceeds the number to be expected from those



released when but fry (from 1 to 2 inches). During 1931, 585,000 fingerling bass from the Winter Haven Hatchery were released in Florida lakes and streams. During 1932, there were 541,000.

This number could be doubled if counties to which young bass are to be delivered would provide themselves with rearing ponds (small bodies of water from which predators and large fish have been removed by draining), to which fry might be delivered to be held in the rearing pond until six inches in length and then distributed to the fresh waters of the county. This has been successfully done in Pinellas County. Were other counties prepared to handle young bass in this way, they could be given the early hatch of half million fry; while a later hatch of approximately the same number could be held at Winter Haven until of fingerling size, then distributed.

## **26. Salvaging Fish**

During the drought of 1931 and its period of extension into 1932, the Department, with local cooperation, salvaged large numbers of brood bass from waters in Sarasota, Pasco, and Orange Counties, transferring them to other waters, thus saving thousands of mature fish and insuring future supply. The high waters that came later in 1932 afforded protection during a part of the spawning season increasing the supply throughout the State.

## **27. Revenue from Fishing Licenses**

Sport fishing in Florida does not bear its proportionate part of the cost of protection and propagation which the State gives. Deputy service for the protection of Florida waters; maintaining and operating the Winter Haven Fish Hatchery and the salvaging of fish are the chief items to be cared for in the program.

In the tourist section of the State, public sentiment does not support the charge made for a non-resident fishing license. In this section the courts have reflected this, making enforcement of the law difficult. In the fiscal year closing June 30, 1931,

#### FOURTH BIENNIAL REPORT

revenue from non-resident fishing licenses totaled \$35,961.00, fewer than 10,000 out-of-state fishermen having purchased licenses. During the fiscal year closing June 30, 1932, revenue totaled but \$20,428.00. To secure increased revenue through increase in the sale of licenses and better cooperation in the enforcement of the law, it is recommended that the cost of non-resident license be changed from \$10.50 to \$5.00 for those who fish in the fresh waters of the State, or, if made applicable to those who fish in fresh or salt waters, or both, from \$10.50 to \$3.00, and that no charge be made for women or children under fifteen years of age. This would be in line with what is charged in many States, and would enable visitors to Florida to enjoy, without subterfuge or disregard of law, one of the attractions that the State delights to offer. The enforcement of this law, should have the whole-hearted support of courts and private citizens. Revenue, it is believed, would be increased.

During the first year in the biennium revenue from the sale of resident fishing licenses totaled \$22,566.00; during the second year, \$21,056.00.

It is recommended that the cost of State-wide Resident Fishing License be reduced from \$3.25 to \$1.00 for those who use artificial bait and from \$3.25 to 50c for those who use line and hook, the same to be applicable to fishing in salt or fresh waters, or both. Women and children under fifteen years of age to be exempt.

The reduced licenses of wider application would seem fairer to all and at the small cost suggested, with no charge to women and children under fifteen, would work a hardship on none. Consideration of this is recommended.

### 28. TRAPPING

Trapping is done largely by men and not by boys in Florida and is done under conditions that differ from those in many states. The law requires that all traps be visited by the trapper once every 24 hours. This law seems to be generally observed. Climatic conditions are conducive to its observance.

An animal cannot remain in a trap for an indefinite period, as it may in frozen regions, without the danger of loss or injury of pelt through spoilage. Florida's trapping industry is on the decline. Fur-bearing animals have declined in numbers; and the steady drop in the fur market of the past few years is directly reflected in Florida's trapping industry. In the season of 1929-30 there were 4588 licensed trappers operating; during the following season this dropped to 2,921; and in the season of 1931-32, to 2,348. The raccoon is Florida's chief fur-bearer, furnishing the bulk of the pelts taken. The otter, never very numerous, yields the most valuable pelt. O'possum, fox, bobcats and skunks, taken in scattering numbers and worth but little at any time, contribute but a small proportion of Florida pelts. Rabbit and squirrel have no commercial value as fur-bearers.

The drop in market prices afforded to the raccoon a needed surcease from trapping, the numbers of this animal having grown noticeably less under the stimulus of the high fur market of a few years ago. Fur buyers of the State, many of them, believe that a closed season on the trapping of coons would be beneficial. It is recommended that the season be shortened by limiting the open season for trapping to the Months of December and January. This would give better protection and would permit the taking of pelts when they were in their prime.

Another provision that should come through legislation is the enactment of a law that will protect beavers in Florida. Thirty of these animals obtained in exchange for Florida Bobwhite Quail have been planted in the Florida wilds. The first pair planted three years ago in Jefferson County have increased to a colony of seven. Others planted elsewhere show themselves adapted to the State.

The last native beaver known to have been killed in Florida was killed in 1926 in Calhoun County. It is believed that the planting made by the Department, if properly protected, will re-establish the line. A law forbidding all trapping, killing or taking of beaver should be passed.

## 29. EDUCATIONAL PROGRAM

Back of every program for the conservation of the native wild life of a section lies knowledge of the life habits of the birds, fish and animals that comprise it, a conviction of the value of the resource and the need of its protection if this wild life is to be conserved. Were this knowledge more general on the part of those who hunt, fish and trap, and more general on the part of the public as a whole, there would be but little trouble in securing the observance and enforcement of conservation laws.

To lay this educational foundation for the work states everywhere have included an educational program in their conservation plan. Florida's educational work has been handled, in the main, by the clerk of the Department whose time is divided between field and office work.

The high spots in the program for the biennium which closed December 31, 1932, included the following:

In the first four months of 1931 extensive educational exhibits were arranged and placed at the fairs held at Winter Haven, Tampa, DeLand, and Orlando; the last two issues of the Department Quarterly, "Florida Woods and Waters", were edited and taken from the press; and, the biennial report for the Department was written and published.

## 30. Fair Exhibits 1931

Exhibits placed at fairs have had an important place in Florida's educational program. They have been built in a setting suggestive of the habitat from which the specimens shown have been taken. They afford the only chance for many to get even this small glimpse of Florida's native wild life. Through the exhibits shown many facts pertaining to the value of this resource and its need of conservation have reached the thousands of visitors annually. These exhibits have been an important factor in building sentiment favorable to the conservation of Florida wild life.

### 31. Florida Woods and Waters

After issuing the two numbers of "Florida Woods and Waters" in 1931, it was decided to discontinue the publication of the quarterly. It had proven an excellent medium through which to carry to Florida and other states facts regarding outdoor Florida, its native wild life, the appeal of life in the open as found in this State and the need of conserving wild life resources; but, Department funds were decreasing, general economic conditions were unsettled. The decision to discontinue the publication seems a wise one.

The total cost for preparing, printing and circulating the five issues printed, (52,500 copies) was \$8,075.00. Revenue produced by the publication totaled \$5,187.00. The remainder was paid from Department funds. (Approximately \$600 of the amount shown in costs are rightly chargeable to other educational work, fairs and the preparation of the Bulletin "Florida Birds". The entire cost of travel in the interest of the three projects by an error in bookkeeping were entered against the publication only.) The Department library contains an excellent file of outdoor Florida cuts, a contribution from the publication, the first issue of which appeared in 1929.

When "Florida Woods and Waters" was discontinued subscribers were given an opportunity to have their unexpired subscriptions cared for either by a refund of the money for the unexpired term or by transferring their names to the mailing list of "Sunrise", a monthly outdoor Florida magazine. With but few exceptions subscribers were transferred to "Sunrise". This fact, and the further fact that "Sunrise" for a time maintained a department entitled "Florida Woods and Waters" have led some to conclude that the Department of Game and Fresh Water Fish directly or indirectly contributed to the monetary support of the publication, and that it was the "quasi-official" organ of the Department. Neither conclusion is correct.

### 32. Bulletin "Florida Birds"

During the summer and early fall of the year much time was given to the preparation and publishing of "Florida Birds", a



splendid bulletin on the bird life of the State published co-operatively with the State Department of Agriculture. A staff of recognized writers on bird life cooperated with the Department of Game and Fresh Water Fish in the preparation of copy for the bulletin, and its editing.

The larger portion of the issue was assigned to the public schools of the State, being given to the several counties through their respective office of county superintendent of public instruction. For closer contacts with schools the Department was represented at a number of the sectional meetings of the Florida Educational Association held during the fall months of 1931. Increased interest in the bird life of the State and its study throughout Florida has come as a result of these contacts and the circulation of the bulletin, "Florida Birds". A limited number of the few remaining copies are being placed at the present time in local libraries of women's clubs where such an organization has, or will organize a local conservation department and will feature at least one bird program during 1933. The response to this offer has been gratifying.

### **33. Exhibits 1932**

In the early months of 1932 the fair program of 1931 was repeated, with an additional small exhibit made at Sanford in connection with an agricultural fair held there. Birds that were defenders of truck crops were featured in this exhibit. This feature exhibit was made possible through a loan made by Dr. F. G. Genung and Mr. R. C. Hallman, both of St. Augustine, of mounted specimens of birds that are of special value to farmers because of their destruction of insect pests. These birds are still in the possession of the Department and have been frequently used in illustrating lectures given in schools and before clubs.

### **34. Work in Schools**

In March of 1932, on request of the Florida Education Association, an educational exhibit from Florida Wild life was placed in Jacksonville at the time of the state meeting of this organization. This was followed by illustrated lecture work in a number of the high schools of the State, and at a state



camp held for young people at Keystone Heights, and a regional camp for Boy Scouts held near Jacksonville.

In the summer of 1932 a request for material based on Florida's interesting wild life, and adapted to use in the primary grades of Florida's public schools, came to the Department from the committee on science of the Florida Education Association, that was working over proposed changes in the school curriculum. A month of intensive work was spent on this very interesting project. Much that was offered has been incorporated in the committee report, which is being printed in several volumes, and in such form as to serve as hand books for teachers. The entire committee project, extending into the several fields of science, and through all grades taught in the public schools, will lay a foundation for a very broad program that would include the conservation of every natural resource of the State.

### 35. "Florida Bird Life"

The richest contribution to Florida's educational program during 1932, a contribution to educational material on bird life throughout America, came from an outside source. Reference has been made in the beginning of this report to the book, "Florida Bird Life" by A. H. Howell, Senior Biologist of the U. S. Bureau of Biological Survey. The publishing of this authoritative work, long anticipated by scientists and students of bird life in America, is a highly significant feat. As stated, its publication was made possible through the cooperation of a friend of Florida bird life, who underwrote the cost of publishing—approximately \$30,000—arranging for the book to sell at nominal cost, \$6.00, with a special price to public or school libraries of \$4.50 a volume. This volume of 580 pages, beautifully illustrated with colored cuts of Florida birds, should be available through libraries to all Florida. Within itself it is a library on the subject which it discusses. Orders for it have come from every State and from many foreign countries. This book is handled from the Department offices and by the New York publishers.

### **36. Cooperative Work**

In the late summer of 1932 the chairmanship of the Division of Birds, Flowers and Wild Life, in the Conservation Department of the Florida Federation of Women's Clubs, was accepted by the Department clerk. This has broadened the field for service. The State Department has noted with interest a resolution passed by the Florida Federation of Women's Clubs that asks the General Federation to seek to secure federal action that would stop the shooting of migratory waterfowl over areas baited with grain. Plans for the observance of Outdoor Florida Week, initiated by the Federation late in 1932, give promise of a program that should be of educational value to Florida and productive of a fine line of publicity.

No report of the educational program would be complete without acknowledging the service of the state press and radio. Generous always with space, the papers not only have kept the wealth of wild life and department activities for its conservation before the public, but, many times, have given editorial support to the conservation program. Radio stations have generously carried the conservation message to their listeners. On several occasions they have given the State Game Commissioner an opportunity to go direct to this large audience. In November Governor Doyle E. Carlton delivered to Florida and, through a hook up of all stations in the State, to the people of other States, a stirring message on values of wild life resources.

Educational work in the high schools of Pinellas County late in December completed the Department's educational program for the biennium.

### **37. GENERAL INCREASE IN WILD LIFE**

The conservation and upbuilding of the native wild life of Florida is in the hands of the people of this State. Results obtained during the biennium just closed are reassuring for there has not only been a noticeable increase in song and insectivorous birds observed about our towns and cities, and plumage birds—picturesque, beautiful—in and about their haunts, but

an increase of those game species that are put under the fire of the sportsman's gun during a limited season each year.

The increase in the supply of deer in breeding grounds has just about enabled this fine game animal to maintain its status of the past few years. The greatest menace to the supply of deer is the man who kills a doe. Often does killed during the hunting season are found with young. To secure the better enforcement of the law prohibiting the killing of doe deer legislation is needed that would require that evidence of the sex be left on a deer carcass. Such legislation is urged. Were dogs taken out of the woods and still hunting which requires a greater degree of skill, practiced, Florida's supply of deer would greatly increase.



"Greatest Menace to Florida's Supply is the Man Who Kills a Doe"

The supply of turkeys in the State has increased in some localities but this choice bird needs better protection. A law protecting turkey hens and permitting the killing of gobblers only would result, as it has resulted in those states that follow the practice, in a large increase in the supply of turkeys. Florida's deep woods afford ideal habitat for the bird. If brought to approximate the possible maximum supply it would add greatly to the value of Florida wild life.

Bobwhite Quail were found throughout the State in greater numbers at the opening of the 1932-33 season than for many years. Favorable breeding seasons, more conservative shoot-

ing in the face of the game shortage of 1931-32, better law enforcement and observance lie back of this gratifying increase.

Florida has sufficient breeding stock of game and fish and a habitat for native wild life adapted to its every need. It is possible to rebuild this valuable resource in the next decade in such measure as would repay many times over the effort, the self-denial and the money that it would cost. So valuable is this asset to the State that it is worthy of every effort that its conservation and rebuilding will cost. Recommendations for the strengthening of Florida's game law, and the furthering of conservation of wild life in Florida have come to the Department from various organizations over the State. Many others have been made by leading sportsmen and conservationists. These, with the views of the Department, have been incorporated in the following legislative recommendations:

### 38. LEGISLATIVE RECOMMENDATIONS

1. The creation of a department for the conservation of all wild life resources.
2. Authority be given to employ a sufficient number of wardens, the number not to exceed seventy, and not more than the funds of the Department will permit.
3. Provide that all monies collected for licenses for fishing, hunting, trapping and so forth shall be used expressly and solely for conservation of wild life resources.
4. Revise laws for closing State Breeding Grounds and Refuges so that boundaries, such as streams, railroads, established public roads, shall serve the same purpose as a fence in establishing boundary lines.
5. Prohibit the carrying of guns in the woods during closed season, and in State Breeding Grounds and Refuges at all times except under permit, with provision that persons may carry guns on their own property for protection of live stock, etc.
6. Reduce to 60 days the open season for killing game—November 20th to January 20th.

7. Reduce season for taking fur-bearing animals to Months of December and January.

8. Reduce cost of State-wide resident fishing licenses, made applicable alike to those who fish in fresh or salt waters, or both, from \$3.25 to \$1.00 for those who use artificial bait, and from \$3.25 to 50c for those who use pole and line.

9. Reduce cost of State-wide non-resident fishing license for fishing in fresh waters of the State from \$10.50 to \$5.00, or, if made applicable alike to those who fish in fresh or salt waters, or both, reduce fee from \$10.50 to \$3.00. (At present a license is not required to fish in salt waters.)

10. Do not require women, or children under 15 years of age, to buy license to fish.

11. Prohibit the sale, or the transportation out of the State for sale, of black bass.

12. Reduce the State-wide resident hunting license from \$8.00 to \$5.00. Eliminate "Additional County Resident Hunting License". Increase County Resident Hunting License from \$1.25 to \$2.00.

13. Reduce the State-wide Non-resident Hunting License from \$25.00 to \$15.00.

14. Prohibit the killing of hen turkeys.

15. Require that evidence of sex be left on deer carcass.

16. Require a minimum fine of \$100.00, or a sentence of 60 days in jail, for fire-hunting, or the dynamiting of fish.

17. Make all persons convicted of violating the game law or fish law ineligible for hunting and fishing licenses for a period of one year.

### 39. FINANCES

The financial status of the Department throughout the biennium has been excellent. By keeping operating expenses at all times below incoming revenue, the Department has been able at all times to render the maximum service provided for



under the law. Though it has been necessary to readjust salaries and travel expenses twice during this period to make this possible, through the loyalty of all employees this has been done without affecting the quality or amount of service rendered. At the close of the biennium—with a credit balance of \$66,733.67, to be supplemented by those sums that will be derived during the coming year from sales of fishing licenses and other operations, the Department stands on the threshold of 1933 with sufficient funds to continue to maintain through the ensuing year a maximum force in the field.

#### 40. Division of the Dollar

An analysis of the expenditure of its dollar by the Department of Game and Fresh Water Fish during the biennium follows:

Administration .....	.06
Clerical service, printing licenses, postage, etc. ....	.08
Protection, game wardens, (salary and travel) .....	.74
Replacement of field equipment and maintenance .....	.01
Propagation of game and fish .....	.09
Education—exhibits, publications, work at fairs, schools, clubs .....	.02
	<hr/>
	\$1.00

This Department operates on funds derived from the sales of licenses, and a small amount allowed by the courts as “arresting fees” where a deputy takes part in the arrest of the law violator. A statement showing the sources from which revenue was derived during the biennium follows:



## REVENUE FROM SALE OF LICENSES

**Classified List of Licenses Sold by County Judges  
Biennium Ending June 30, 1932**

<b>Hunting</b>	<b>Fiscal year ending</b>	<b>June 30, 1931</b>	<b>June 30, 1932</b>
Series A, Resident County -----	@ \$1.00	\$37,014.00	\$34,111.00
Series B, Resident other than home county -----	@ 3.00	5,280.00	7,152.00
Series C, Resident State -----	@ 7.50	66,720.00	54,375.00
Series D, Non-resident State ----	@ 25.00	14,150.00	8,800.00
		<hr/> \$123,164.00	<hr/> \$104,438.00
<b>Fishing</b>			
Series E, Resident County other than home -----	@ \$1.00	\$ 4,527.00	\$ 3,560.00
Series R, Resident State -----	@ 3.00	18,039.00	17,496.00
Series F, Non-resident County ---	@ 3.00	26,911.00	14,298.00
Series G, Non-resident State ----	@ 10.00	9,050.00	6,130.00
		<hr/> \$58,527.00	<hr/> \$41,484.00
<b>Trapping</b>			
Series N, Resident County -----	@ \$3.00	\$ 8,433.00	\$ 6,861.00
Series Q, Resident County other than home -----	@ 10.00	940.00	490.00
Series P, Resident State -----	@ 25.00	400.00	200.00
Series O, Non-resident County --	@ 25.00		100.00
		<hr/> 9,773.00	<hr/> 7,651.00
Receipts, no licenses issued -----			<hr/> 47.00
Total Sales by County Judges -----		\$191,464.00	\$153,620.00

The law provides that for each license sold by county Judges, or by persons authorized by such county judges to sell, an issuance fee of 25c for each license costing \$3.00 or less shall be paid; and for each license costing more than \$3.00 an issuance fee of 50c shall be paid. Under this provision buyers of hunting, fishing and trapping licenses paid during the fiscal year closing June 30, 1931 the sum of \$20,513.50; for the fiscal year closing June 30, 1932, the sum of \$17,373.00. These funds are not handled by the Department of Game and Fresh Water Fish.

FOURTH BIENNIAL REPORT

**Revenue from Commercial Licenses issued by  
Game Commissioner's Office**

Retail Fish Dealers -----	\$4,475.00	\$2,360.00
(25 issued to Disabled War Veterans, no cost)		
Wholesale Fish Dealers -----	1,500.00	950.00
(7 issued to Disabled War Veterans, no cost)		
Commercial Fishing Boats -----	624.60	290.00
(3 issued to Disabled War Veterans, no cost)		
Boats for Hire -----	1,768.00	1,786.50
(13 issued to Disabled War Veterans, no cost)		
Fur Dealers -----	1,820.00	1,680.00
Guides -----	140.00	80.00
Game Farm -----	65.00	125.00
(1 issued to Disabled War Veteran, no cost)		
Alien Hunting License -----	50.00	50.00
Osceola County seining permits -----		90.00
	<u>\$10,442.60</u>	<u>\$7,311.50</u>

A summary of Receipts and Disbursements for the biennium and a summary for the same for the period extending from July 1st, 1932 through December 31st, 1932, follows:

# FINANCIAL STATEMENT FOR YEAR ENDING JUNE 30, 1931

DEPARTMENT OF GAME AND FRESH WATER FISH

RECEIPTS		DISBURSEMENTS	
Hunting, Fishing, Trapping licenses -----	\$163,733.40	Administrative salaries -----	\$ 7,400.04
Retail Fish Dealers License -----	4,475.00	"    expense -----	1,513.35
Wholesale Fish Dealers " -----	1,500.00	Office salaries -----	5,786.00
Commercial Fish Boat " -----	624.60	"    expense, (printing, supplies, etc.) ---	8,108.14
Boat for hire -----	1,768.00	"    equipment -----	425.00
Guide -----	140.00	Field Salaries -----	71,479.68
Game Farm -----	65.00	"    Expense -----	61,371.49
Fur Dealers -----	1,820.00	"    Equipment -----	653.57
Court Costs -----	3,064.52	"    Maintenance -----	1,390.18
Interest on Bank Deposits -----	718.97	Restocking & Transferring -----	6,258.36
Confiscated Furs sold -----	171.25	Fish Hatchery Construction -----	6,398.66
Alien Hunting license -----	50.00	"    "    operation -----	13,914.23
Miscellaneous -----	32.57	Education, (Material, Bulletin, Fairs,) -----	4,032.71
Rec'd on licenses for next fiscal year -----	836.00	Attorney's fees & expense -----	289.00
		Court costs -----	47.08
		Total -----	\$189,067.49
		Repaid Genl. Inspection Fund on loan	
		to pay employees of former administration..	13,000.00
Total Receipts -----	\$178,999.31	Total Disbursements -----	\$202,067.49

Receipts -----	\$178,999.31
Balance cash on hand, July first 1930	
(beginning of fiscal year) -----	71,729.33
Total Net Receipts -----	\$250,728.64
Less Disbursements for Fiscal Year -----	202,067.49
Balance on Hand, July 1st, 1931 -----	48,661.15

\*Note—Failure of county judges to remit all funds collected prior to close of fiscal year accounts for difference in this amount and that shown on page 45.

# FINANCIAL STATEMENT FOR YEAR ENDING JUNE 30, 1932

## RECEIPTS

Hunting, Fishing and Trapping License	\$144,475.80
Retail Fish Dealers	2,020.00
Wholesale Fish Dealers	750.00
Commercial Boat	269.00
Boats for Hire	1,441.50
Fur Dealers	1,670.00
Game Farm	105.00
Guide	80.00
Alien Hunters	50.00
Osceola County Fishing Permits	90.00
Interest on Bank Deposits	306.67
Court Costs	2,094.86
Check on closed banks paid in since last audit	651.04
Sale of Confiscated Furs	44.00
Part Pymt. Retail fish license & boat license	3.50
Refund on Telephone message	.40
" " Insurance Policy	4.76
Wholesale Fish Dealers License (previous year collected in 1932)	50.00
Refunds made in stamps	.60

Total ----- \$154,107.13

## DISBURSEMENTS

Administration, salaries	\$ 2,441.67
" expense	1,536.53
Office, salaries	6,874.02
" expense, printing, supplies, etc.	5,001.08
" equipment	72.50
Field salaries	71,741.87
" expense	45,415.18
" equipment	594.67
" maintenance of equipment	1,173.31
Restocking Game	2,232.40
" Fish (other than hatchery)	194.00
Education (material, exhibits, fair work)	2,243.88
Legal service	145.00
Fish Hatchery Construction	204.33
" " Operation	8,872.75

\$148,743.52

Receipts ----- \$154,107.13  
Balance on Hand beginning fiscal year ----- \$ 48,661.15

Net Receipts ----- \$202,768.28  
Less Disbursements ----- 148,743.52

54,024.76  
Loan to General Fund of State ----- 17,500.00

Net Cash Balance, end of Fiscal Year ----- \$ 36,524.76

\*Note—Failure of county judges to remit all funds collected prior to close of fiscal year accounts for difference in this amount and that shown on page 45.

# FINANCIAL STATEMENT, JULY 1ST THROUGH DECEMBER 31ST, 1932

## RECEIPTS

Hunting, Fishing and Trapping Licenses	----	\$ 83,333.80
Retail Fish Dealers'	-----	695.00
Wholesale Fish Dealers'	-----	200.00
Commercial Fish Boat	-----	50.00
Boat for Hire	-----	784.00
Fur Dealers'	-----	695.00
Game Farm	-----	25.00
Guide	-----	10.00
Court Costs	-----	982.48
Osceola County Fishing Permits	-----	5.00
Interest	-----	65.94
Miscellaneous	-----	320.79
		<u>\$ 87,167.01</u>

## DISBURSEMENTS

Administration Salary	-----	\$ 1,200.00
" Expense	-----	663.98
Office Salaries	-----	2,959.02
" Expense	-----	1,795.07
Field Salaries	-----	36,897.98
" Expense	-----	24,966.43
Restocking and Transferring	-----	557.24
Fish Hatchery Operation	-----	4,991.68
Fish Hatchery Construction	-----	14.56
Educational Work	-----	227.38
Miscellaneous	-----	184.76
		<u>\$74,458.10</u>

Balance on hand July 1st, 1932	-----	\$ 54,024.76*
Receipts since July 1st, 1932	-----	87,167.01
		<u>\$141,191.77</u>
Disbursements since July 1st, 1932	-----	74,458.10
		<u>Balance on Hand -----</u>
		\$ 66,733.67*

\*Includes amount of \$13,500.00 due from other State Funds.

DEPARTMENT OF GAME AND FRESH WATER FISH